by numerous color photographs and further illustrated by many clear diagrams. These can be credited to the senior author, although he modestly does not claim such credit.

How could one characterize this book? It is certainly authoritative, and it is comprehensive as well. It is thoroughly English, which contributes a certain rustic charm. It is deep in basic science information and includes much clinical wisdom. For those who have not seen the first edition, this second contribution will prove invaluable. As of the end of this century, it contains much information from the past century also.

The authors cite three developments in understanding of venous pathophysiology, which have stimulated the second edition. The first is refinement of duplex ultrasound scanning. Entirely new blocks of this volume are devoted to duplex ultrasound scan diagnostic techniques. Emphasis is given to the use of ultrasound scan diagnosis of deep venous thrombosis, although one may have hoped for more on detection and quantitation of venous reflux. Also, a clear description of techniques to give reliable and reproducible information to guide surgical intervention would have been appreciated. An appraisal of ultrasound scan–guided sclerotherapy by the analytic authors of this new edition could have proved valuable.

A second stimulus for the creation of this volume is an increased understanding of the role of interactions between circulating leukocytes and the vascular endothelium. Although the focus of this knowledge is a better understanding of venous ulceration, in fact, an application of this information to the etiology of primary varicose veins could have been appropriate.

Although abandonment of some theories and treatments is claimed in the preface to the second edition, one detects difficulty in eliminating material in the first edition when constructing the second. For example, phleborheography remains, as does impedance plethysmography. These and their companion, strain-gauge plethysmography, could probably have been honored by omission.

This reviewer's favorite chapter remains the carefully researched and succinctly edited historic introduction entitled "Milestones, pebbles, and grains of sand." That title is characteristic of the volume as a whole. It has charm, meaning, thoughtfulness, and personality. In addition, this book has visual rewards in its many illustrations.

This is a must-have book for vascular surgeons and general surgeons interested in the total care of the three vascular systems. It should be found in vascular laboratories that deal with arterial and venous problems and in the libraries of training services that purport to teach total vascular surgery.

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Estrogen and the vessel wall

Gabor Rubanyi, Raymond Kauffman; Amsterdam; 1998; Harwood Academic Publishers; 274 pages; $148.00.

Estrogens have a diverse influence on target tissues, including affecting growth, differentiation, and function. There is a growing body of evidence, arising from epidemiologic data, that estrogen has a direct effect on the vascular wall. For example, women have more chronic inflammatory disease than do men and they have less cardiovascular disease, a protection that is diminished after menopause. We are just beginning to understand these direct effects on the cells within the vascular wall, and this book, *Estrogen and the vessel wall*, is a great place to start.

At first glance, this book looks like another synopsis of a symposia in which all the chapters are too specific and are interesting only to those in that particular field. However, this book is different in that there was a clear effort to make each chapter readable and understandable to those outside the field. This resulted in a book that is a great resource for understanding vascular biology and the influence of estrogen on both physiologic and pathologic cardiovascular processes. Specific data are presented only to enhance the understanding of a particular topic and not as the main focus of any chapter, thus making this book not only useful, but enjoyable to read.

One of the clearest chapters in this regard is chapter 4, "The estrogen receptor in the cardiovascular system." This chapter gives a series of findings that may help explain the reason for estrogen's protective effect on atherosclerosis. The authors first provide evidence that there is a functional estrogen receptor present on endothelium and smooth muscle. They then proceed to present evidence that estrogen has an antiproliferative effect on vascular smooth muscle and that there is a decrease in estrogen receptor expression in atherosclerotic coronary arteries. They then go on to demonstrate that endothelial cells also have a functional estrogen receptor and that estradiol affects the endothelium to inhibit programmed cell death and accelerates the functional recovery of endothelium after arterial injury. This chapter not only provides convincing evidence of estrogen's role in protection and recovery from atherogenesis but also explains enough of the methods so that even those who do not do molecular biology will have a clear understanding of the techniques.

One other nice feature of this book is that there are several chapters that deal with nonconventional and deleterious effects of estrogen. For example, chapter 5, "Role of estrogen in endothelial cell behavior," gives an interesting insight into the role of estrogen in increasing the inflammatory process. Many autoimmune diseases, including rheumatoid arthritis and lupus, are more common in women than in men, giving rise to the hypothesis that sex steroids influence these inflammatory processes. This chapter addresses an adverse effect of estrogen on the vascular endothelium, that of activating and sustaining an immune response. The inclusion of these chapters allows the reader to consider all aspects of this hormone's influence on health and disease.

There are several chapters that deal with the direct effect of estrogen on vascular tone, an interesting topic to all vascular biologists. Chapter 11, "Estrogen and vascular

tone," presents a complete review on what is currently known about both the acute and chronic effects of estrogen and vascular tone, including its effects on blood flow and vascular smooth muscle relaxation. This is followed by a related chapter on endothelium-dependent vasoconstrictors, which would serve to counteract the vasodilating influence of estrogen on smooth muscle. Similar work is presented in chapter 16, which discusses the role of estrogen on vasoreactivity in the context of atherosclerosis.

The last part of the book deals with the use of animal models of atherosclerosis and vasospasm and present findings on estrogen's effect on these disease processes. The last chapter is on the prevention of cardiovascular disease by estrogen, which adds a certain completeness to the book. Although there are several other effects of estrogen not presented, such as those associated with vascular growth and angiogenesis, I highly recommend this book to any physician or scientist interested in estrogen and cardiovascular disease.

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BOOKS RECEIVED

The receipt of the books listed below is acknowledged. This listing is regarded as appropriate return for the courtesy of the sender. The books that are of particular interest will be reviewed and the review published as space permits.

Vascular and interventional radiology
Karim Valji; Philadelphia; 1999; W.B. Saunders; 512 pages; $140.00.

Chronic wound healing: clinical measurements and basic science
Raj Mani, Vincent Falanga, Clifford Shearman, Derek Sandeman; Philadelphia; 1999; W.B. Saunders; 196 pages; $69.00.

Clinical trials in cardiovascular disease: a companion to Braunwald's heart
Charles Hennekens; Philadelphia; 1999; W.B. Saunders; 496 pages; $130.00.

Cardiology, 7th ed
Desmond Julian, J. Campbell Cowan, James McLenachan; London; 1998; W.B. Saunders; 425 pages.

Hemostasis in cardiac surgery
Safuh Attar; Armonk; 1999; Futura; 262 pages; $74.00.

Thrombolytic therapy
Gerald Timmins; Armonk; 1999; Futura; 357 pages; $98.00.

Ultrasound atlas of vascular diseases
Carol Krebs, Vishan Giyanani, Ronald Eisenberg; Stamford; 1998; Appleton & Lange; 438 pages; $175.00.

Nitric oxide protocols
Michael Titheradge; Totowa; 1998; Humana Press; 324 pages; $59.50.

Transmembrane signaling protocols
Dafna Bar-Sagi; Totowa; 1998; Humana Press; 328 pages; $64.50.